

REMARKS

Claims 1-3 and 5-12 are pending in this application. Claim 1 is independent.

Allowable Subject Matter

Applicants wish to thank the Examiner for indicating that the subject matter of claim 8 is allowable.

Objection to the Specification

The specification has been objected to because the title is not descriptive. It is noted that the title had been replaced with a new title "OPTICAL PICKUP DEVICE FOR MAGNETO-OPTICAL DISK". If the replacement title is the subject of the objection, Applicants reserve the right to amend the title commensurate in scope with allowed claims.

Claim Rejection; Kobayashi, Yoshida, Ando

Claims 1, 5, 6, and 12 have been finally rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,621,714 ("Kobayashi") in view of U.S. Patent 5,428,595 ("Yoshida") and U.S. Patent 5,272,685 ("Ando"). Applicants respectfully traverse this rejection.

Claim 1, among other things, recites a feature that the first diffraction element receives light that passes through both sections of the beam splitter.

The Office Action states that Kobayashi does not disclose the claimed first diffraction element (bottom of page 3, beginning with the statement, “However, Kobayashi does not disclose a first diffraction element ...”). Instead, the Office Action relies on Yoshida’s disclosure of a diffraction element (figure 5, element 20). The Office Action expresses that figure 6 shows that outputs of Yoshida’s photodetection portions are used to obtain a focus error signal.

The Office Action provides as a motivation to combine Yoshida and Kobayashi that,

“It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have added the diffraction element of Yoshida between the beam splitter and photodetector of Kobayashi, the motivation being to obtain a more accurate reading of a focus error signal, thereby minimizing recording/reproducing errors (see column 12, lines 9-22) and ensuring recording/reproduction accuracy.” (Office Action, page 4).

Applicants submit that the Office Action’s suggestion of adding the diffraction element 20 of Yoshida between the beam splitter and photodetector of Kobayashi would not result in more accurate reading of focus error. Applicants submit that instead the combination would result in a redundant function that would render Kobayashi’s device unsuitable for carrying out its intended operation (see *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984), as discussed in MPEP 2143.01). In Kobayashi, holograms 112c and 112d diffract return beams to light receiving regions 121 and 120, respectively, in order to detect focusing error (Kobayashi at col. 20, lines 49-59). Yoshida’s diffraction element 20 also serves to diffract light beams in detection of

focusing error. Kobayashi's diffraction elements 112c/112d already provide the diffraction function necessary for proper operation of its device. Inserting the diffraction grating of Yoshida in the path of differential beams from 112c/112d would only result in altering the diffraction pattern of Kobayashi's device in a manner that may render it unsuitable for carrying out its intended operation. Because Kobayashi's device already contains a diffraction element 112c/112d, Applicants submit that it would not have been obvious to one of ordinary skill to insert another diffraction grating between that existing diffraction grating and the photodetector. Rather than obtaining a more accurate focus error signal as alluded to in the Office Action, the combination would render the device of Kobayashi unsuitable for carrying out its intended operation.

Ando is relied on for its teaching of specific materials for optical members. Ando also fails to make up for the above stated deficiency in Kobayashi and Yoshida. Thus, for at least this reason, Applicants submit that the rejection fails to establish *prima facie* obviousness. Applicants respectfully request that the rejection be reconsidered and withdrawn.

In the alternative, Applicants submit that one of ordinary skill in the art would not have considered inserting the diffraction grating 20 of Yoshida in the path between birefringent crystal plate 113 and photodetectors 118/119 of Kobayashi, because such a combination would also result in redundant components, in this case for detecting reproduced information (discussed in Kobayashi at column 20, lines 7-48). Kobayashi's birefringent crystal plate 113 already provides divided beams necessary for differential detection.

In either case, combining Yoshida's diffraction element 20 with Kobayashi's arrangement would change the principle of operation of Kobayashi's system. Yoshida's second diffraction element 20 is part of an arrangement for implementing the "three-beam method" (Yoshida at column 6, lines 12-37). Kobayashi's fourth embodiment shown in Figure 24 determines focusing error using a knife-edge method (column 20, lines 55-60). Tracking error is obtained by the push-pull method. Adding a diffraction element to the arrangement of Kobayashi would result in an unusual diffraction pattern and render it unable to implement the knife-edge method.

Furthermore, Applicants submit that the combination of Yoshida and Kobayashi is based on impermissible hindsight. Neither Yoshida nor Kobayashi teach or suggest the position of the diffraction element with respect to the beam splitter.

"[P]articular findings must be made to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000).

The only information indicating that a diffraction element would be located between the beam splitter and photodetector comes from applicants' own disclosure. In other words, without applicants' own disclosure, there is no evidence as to the position that the diffraction element of Yoshida would be placed with respect to a beam splitter.

Thus, for the above reasons, Applicants respectfully request reconsideration and withdrawal of the rejection.

Claim Rejections

Claims 2, 3 and 10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi, Yoshida, and Ando and further in view of another embodiment of Kobayashi. Claim 7 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi, Yoshida, and Ando and further in view U.S. Patent No. 5,790,504 to Hayashi et al. Claim 9 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi, Yoshida, and Ando and further in view U.S. Patent No. 6,266,313 to Yanagawa et al. and Claim 11 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi, Yoshida, and Ando and further in view Japanese Patent No. JP 10101486 to Komatsu et al.

At least for the reasons above for claim 1, Applicants submit that Kobayashi, Yoshida and Ando, either alone or in combination, fail to teach each and every claimed element of the dependent claims, as well. Thus, Applicants submit that *prima facie* obviousness has not been established for claims 2, 3, 5-7, and 9-12, and respectfully request that the rejection of those claims be withdrawn.

Further with respect to claim 7, the claimed second diffraction element divides the received light from the source of light into at least three beams of light, e.g., two tracking beams and one information reproducing beam. As is admitted in the Office Action, Kobayashi fails to disclose a diffraction element

that divides light received from the source of light. Rather, holograms 112c and 112d diffract light of a return beam (see column 20, lines 49-55).

The Office Action relies on Hayashi to teach the deficiency of Kobayashi of failing to teach a second diffraction element that divides light received from the light source. In particular, the Office Action directs Applicants' attention to Figure 1 and an associated description on column 6 of Hayashi. In column 6, Hayashi states that, "light passing the polarized light separation plane 23a of the polarizing prism 23 is incident on the holographic diffraction grating 22..." It goes on to state that, "This incident light is diffracted with a diffraction angle of approximately 5-25 degrees such that ... the diffracted light is incident on the one photodiode 18...". In other words, the description on column 6 concerns light from the return path to the photodiode 18, as well as photodiode 19 (see column 6, lines 12-19). On column 5, lines 35-38, Hayashi discloses that light emitted from the laser diode 17 passes the holographic diffraction grating 22 and is incident on the polarized light separation plane 23a of the polarizing prism. Thus, it can be seen that Hayashi teaches the same use of a hologram as Kobayashi, and thus fails to make up for the deficiency of Kobayashi, Yoshida and Ando. Therefore, at least for these additional reasons, Applicants submit that the rejection fails to establish *prima facie* obviousness for claim 7.

CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance and such allowance is respectfully solicited. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert W. Downs (Reg. No. 48,222), to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1. 17; particularly, extension of time fees.

Respectfully submitted,

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